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EXAMINER

REFAI, RAMSEY

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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## DETAILED ACTION

### *Response to Amendment*

Responsive to 'Response to Restriction/Election' filed November 10, 2008. Applicant's election **with traverse** of Group I (claims 1-5 and 20-23) is acknowledged.

### *Election/Restrictions*

1. The traversal is on the ground(s) that:

*I) there is no justification for the restriction at this point of prosecution and*

With regards to Argument I, the Examiner respectfully disagrees. 37 CFR 1.142 (a) reads: "Such requirement will *normally* be made before any action on the merits; **however, it may be made at any time before final action.**" Although a restriction requirement *normally* should be made before any action, it may be made anytime before final action. Nothing in 37 CFR 1.142 prevents a requirement from being made after an action on the merits but rather allows for a requirement ***anytime*** before final action. The status of the case at the time the requirement was made was after non-final action and before final action.

*II) the conditions for 806.05(d), (subcombinations usable together) have not been met.*

With regards to Argument II, the Examiner respectfully disagrees. The claims are separately usable, do not overlap in scope and are not obvious variants. Group I is directed to configuring data communication paths which is different from Group II which is directed to a method for gathering diagnostic data (see at least the preambles). These claims are clearly directed to different inventions that are separately usable. The Applicant has also compared claim 1 to claim 6 to show that the claims are not subcombinations. The Examiner disagrees. To better illustrate the differences and to show clearly that the claims do not overlap in scope and are not obvious variants, the following table is presented:

Claim 1	Claim 6
<p>A method for <b><u>configuring data communication paths</u></b> between a central controller and a plurality of printing devices via a plurality of appliances, the method comprising</p>	<p>A method for <b><u>gathering diagnostic data</u></b>, which are associated with a plurality of printing devices, by a central processing unit via a plurality of intermediate collectors that are connected to one or more of the plurality of printing devices through a network, where an intermediate collector is a computer remote from the control, <b><u>processing unit configured to collect diagnostic data from a selected printing device</u></b>, the method comprising</p>
<p><b><u>--ensuring one or more appliances of the plurality of appliances are active</u></b> where an appliance is a computer remote from the central controller configured to collect diagnostic data from one or more of the plurality of printing devices and to transmit the diagnostic data to the central controller;</p> <p>--for each of the printing devices, determining communication capabilities with the one or more appliances to determine communication paths between the plurality of printing devices and the one or more appliances;</p> <p><b><u>--transmitting signals indicative of the communication capabilities to the central controller;</u></b></p> <p>and</p>	<p>--determining which of the plurality of intermediate collectors are capable of communicating with one or more of the plurality of printing devices to obtain a communication map to allow an automatic intermediate collector failover to occur if an intermediate collector fails to operate;</p> <p><b><u>--receiving a notification signal within the central processing unit that one of the intermediate collectors is available;</u></b></p> <p><b><u>--identifying one of the printing devices for which the diagnostic data is desired;</u></b></p> <p><b><u>--determining whether the identified printing device is capable of communicating with the available intermediate collector;</u></b></p>

<p><u>--mapping respective communication paths between the central controller and the printing devices via the one or more appliances as a function of the communication capabilities to obtain an automatic appliance failover to allow diagnostic data to be collected from a selected printing device by way of multiple appliances.</u></p>	<p><u>--if the identified printing device is capable of communicating with the available intermediate collector:</u></p> <p><u>transmitting a request signal from the central processing unit to the available intermediate collector requesting the diagnostic data for the identified printing device; and</u></p> <p><u>transmitting signals indicative of the diagnostic data from the identified printing device to the central processing unit via the available intermediate collector</u></p>
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The differences between claim 1 and claim 6 are highlighted above. Among other differences, claim 1 includes mapping respective communication paths between the central controller and the printing devices via the one or more appliances as a function of the communication capabilities to obtain an automatic appliance failover, which is not required by claim 6. Among other differences, claim 6 includes the limitations of identifying one of the printing devices for which the diagnostic data is desired; if the identified printing device is capable of communicating with the available intermediate collector: transmitting a request signal from the central processing unit to the available intermediate collector requesting the diagnostic data for the identified printing device; and transmitting signals indicative of the diagnostic data from the identified printing device to the central processing unit via the available intermediate collector, which are not required claim 1.

The groups are directed to different inventions. They each contain limitations which are not found in the other group. They are related as subcombinations usable together, do not overlap

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in scope and are not obvious variants and therefore are properly restricted. The requirement is still deemed proper and is therefore made FINAL.

**Claims 6-11 are therefore withdrawn.**

**Claims 1-5 and 20-23 remain pending.**

### ***Response to Arguments***

2. Applicant's arguments filed July 2, 2008 have been fully considered but they are not persuasive.

With regards to the pending claims, the Applicant argues with substance:

Argument A: *In AAPA, 1) signals indicative of the communication capabilities are not transmitted to a central controller and 2) the central controller does not map the communication paths but rather an operator manually performs the mapping process for devices that can communicate to each other based on assumptions such as the device addresses (claim 1).*

In response to part 1, the Examiner respectfully disagrees. AAPA does teach signals indicative of the communication capabilities are transmitted to the central controller. In at least paragraphs [0002-0003], AAPA teach that a central controller evaluates parameters (e.g. status and usage) gathered from the various devices during a monitoring process for scheduling maintenance and identifying devices that need immediate service. Signals are inherently used when communicating status and usage data from the devices to the central controller via a network.

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Regarding part 2 of the argument, claim 1 does not recite that the controller maps the communication paths nor does the claim specify what device or who maps the communication paths. The limitation is duplicated below:

[mapping respective communication paths between the central controller and the printing devices via the one or more appliances as a function of the communication capabilities to obtain an automatic appliance failover to allow diagnostic data to be collected from a selected printing device by way of multiple appliances].

The claim merely requires the mapping of the communication paths and *does not specify that the controller maps the communication paths nor does the claim specify what device or who maps the communication paths*. AAPA teaches that mapping is performed to identify the communication capabilities of each device. The mapping information includes information on the mapping of each device to the central controller via a designated data collection device (**see at least paragraphs [0003-0005]**). The method of mapping taught by AAPA meets the scope of the claimed limitations.

Argument B: *The claimed controller configured to generate a map of the communication paths based on signal received from the plurality of appliances is not taught and the claim is not anticipated.*

In response, the Examiner respectfully disagrees. The claim **does not teach** that **the controller** is configured to **generate a map of communication paths based on signals** received from the plurality of appliances. The claim merely requires the mapping of the communication paths and does not specify that **the controller** generates a map nor how or what device performs the mapping. The claim does not recite that the map is generated **based on signal received** from the plurality of appliances. AAPA does teach signals indicative of the communication capabilities are transmitted to the central controller. In at least paragraphs

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[0002-0003], AAPA teach that a central controller evaluates parameters (e.g. status and usage) gathered from the various devices during a monitoring process for scheduling maintenance and identifying devices that need immediate service. Signals are inherently used when communicating status and usage data from the devices to the central controller via a network. AAPA teaches that mapping is performed to identify the communication capabilities of each device. The mapping information includes information on the mapping of each device to the central controller via a designated data collection device (**see at least paragraphs [0003-0005]**). Therefore AAPA meets the scope of the claimed limitations.

Argument C: *The references fail to teach or suggest that the controller is configured to perform an automatic appliance failover to a second appliance using the map of the communication paths as recited in the claim. Applying "Official Notice" to reject the claims has not been "judiciously" applied and should be removed.*

In response, the Examiner respectfully disagrees. AAPA in view of "Official Notice" teaches this claimed limitation. AAPA teach a central controller that stores mapping information of how the devices on the network are connected to each other and that each of the devices communicate with at least one data collection device to collect diagnostic data that is sent to the central controller. AAPA also teaches the concept of load balancing which is known as the transfer of duties or tasks from one device to another device in order to balance the load evenly among all devices (**see at least paragraphs [0003-0004]**). AAPA fails to teach that *the controller performs an automatic appliance failover to a second appliance using the map of the communication paths if the first appliance is disabled in order to receive the diagnostic data relating to the selected printing device*. However, "Official Notice" is taken that the concept and advantage of automatic failover for devices is well known and expected in the art. It would have



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been obvious to one of ordinary skill in the art to modify AAPA to include an automatic failover because doing so would allow for diagnostic data to be obtained from a different data collection device if a failure occurs at the first data collection device. Therefore, AAPA in view of "Official Notice" meets the scope of the claimed limitations.

Additionally, the Applicant argues that the use of "Official Notice" to reject the claims has not been "judiciously" applied and should be removed. In response, the Examiner respectfully disagrees. The use of Official Notice has been judiciously applied and was used only to reject the well known limitation, which is merely automatic appliance failover. The Applicant has not adequately traversed the Official Notice taken in the previous action. " *To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art.*" MPEP 2144.03c. **Therefore the common knowledge or well-known in the art statement is taken to be admitted prior art because the traverse was inadequate. MPEP 2144.03c**

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 4, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA (Applicant Admitted Prior Art, referencing US Publication 2003/0097469).

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5. As per claim I, AAPA teach a method for configuring data communication paths between a central controller and a plurality of printing devices via a plurality of appliances, the method comprising:

one or more appliances **(data collection devices)** where an appliance is a computer remote from the central controller configured to collect diagnostic data from one or more of the plurality of printing devices **(paragraph [0002])** and to transmit the diagnostic data to the central controller **(paragraphs [0004-0005]; data collection devices monitor and obtain diagnostic data from printers);**

for each of the printing devices, determining communication capabilities with the one or more appliances to determine communication paths between the plurality of printing devices and the one or more appliances **(paragraph [0004]; mapping information is obtained, each of the devices communications and is associated with at least one data collection device);**

transmitting signals indicative of the communication capabilities to the central controller **(paragraph [0003]);**

and

mapping respective communication paths between the central controller and the printing devices via the one or more appliances as a function of the communication capabilities to obtain an automatic appliance failover to allow diagnostic data to be collected from a selected printing device by way of multiple appliances **(paragraphs [0004]; each of the devices communicate with at least one data collector).**

AAPA fails to teach *ensuring that the appliances are active*. However, it would have been obvious to ensure that the devices are active prior to determining communications capabilities because doing so would allow for the mapping of devices to be properly obtained.

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6. As per claim 4, AAPA teach:

for each of the printing devices, determining a second communication capability between a second appliance and the printing device; transmitting signals indicative of the second communication capabilities to the central controller; and wherein the mapping includes: mapping the respective communication paths between the central controller and the printing devices via the first and second appliances as a function of the first and second communication capabilities **(paragraphs [0003-0004]: mapping of devices is performed to identify how devices communicate with each other, each device communicates with at least one of the data collection devices).**

7. As per claim 5, AAPA teach the mapping includes: substantially balancing respective printing device loads across the appliances **(paragraph [0004]; load balancing).**

8. Claims 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA (Applicant Admitted Prior Art) in view of "Official Notice".

9. As per claim 20, AAPA teach a system comprising:

a plurality of printing devices **(paragraph [0002]);**

a plurality of appliances where an appliance is a computer configured to collect diagnostic data from one or more of the plurality of printing devices **(paragraph [0004]; data collection devices);**

a communication network configured to provide a plurality of communication path between components connected to the communication network **(paragraph [0003]; network);**

the plurality of printing devices and the plurality of appliances being connected to the communication network where communication paths are provided between one or more of the

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plurality of printing devices and one or more of the plurality of appliances (**paragraphs [0003-0004]**);

a controller remote from the appliances configured to communicate with the plurality of appliances and being configured to generate a map of the communication paths between the printing devices and the appliances based on signals received from the plurality of appliances; the controller being configured to receive, from a first appliance from the plurality of appliances, diagnostic data relating to a selected printing device (**paragraphs [0003-0004]**).

AAPA teach a central controller that stores mapping information of how the devices on the network are connected to each other and that each of the devices communicate with at least one data collection device to collect diagnostic data that is sent to the central controller (**paragraphs [0003-0004]**). AAPA fails to teach that the controller performs an automatic appliance failover to a second appliance using the map of the communication paths if the first appliance is disabled in order to receive the diagnostic data relating to the selected printing device.

However, "Official Notice" is taken that the concept and advantage of automatic failover for devices is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to modify AAPA to include an automatic failover because doing so would allow for diagnostic data to be obtained from a different data collection device if a failure occurs at the first data collection device.

**The common knowledge or well-known in the art statement is taken to be admitted prior art because the traverse was inadequate. MPEP 2144.03c**

10. As per claim 21, AAPA teach automatically mapping the communication paths based on signals received from the plurality of appliances (**paragraph [0003]**).

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11. As per claim 22, AAPA fails to teach *ensuring that the appliances are active*. However, it would have been obvious to ensure that the devices are active prior to determining communications capabilities because doing so would allow for the mapping of devices to be properly obtained.

12. As per claim 23, AAPA teach means for identifying addresses of the appliances and addresses of the printing devices with which the appliances are capable of communicating **(paragraph [0003])**.

13. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over AAPA in view of Basso et al (US Patent No. 6,370,119).

14. As per claim 2, AAPA teach the mapping of devices **(paragraphs [0003-0004])** but fail to teach *identifying an optimal path between the appliance and the printing device*; and mapping the respective communication paths between the central controller and the printing devices as a *function of the optimal paths*. However, identifying optimal paths of a network is well known in the art as evidenced by Basso et al, who teach a method for determining the optimal path in a network between two nodes **(abstract, column 2, line 39-column 3, line 10)**. It would have been obvious to one of ordinary skill in the art at the time of the Applicant's invention to combine AAPA and Basso et al because doing so would provide mapping that indicates optimal paths to printers in order to quickly and efficiently collect diagnostic data.

15. As per claim 3, AAPA-Basso et al teach the identifying includes at least one of:  
determining one of a plurality of paths between a selected appliance and a selected printing device having a least number of hops; and determining one of a plurality of paths between the selected appliance and the selected printing device achieving a shortest communication time **(Basso et al: column 2, lines 44-50, abstract)**.

### ***Conclusion***

Examiner's Note: The Examiner has cited specific citations in the reference(s) as applied to the claim(s) above for the convenience of the Applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that the Applicant, in preparing their response, fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Refai whose telephone number is (571) 272-3975. The examiner can normally be reached on M-F 8:30 - 5:00 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ryan Zeender can be reached on (571) 272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Ramsey Refai  
February 13, 2009  
/Ramsey Refai/  
Examiner, Art Unit 3627